Claims:

1. A 3-5 group compound semiconductor represented by the general formula $In_xGa_yAl_zN$ ($x+y+z=1$, $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$, $0 \leqq z \leqq 1$) in which the concentration of an n-type carrier is 1×10^{19} cm^{-3} or less, wherein the concentration of a p-type dopant is 1×10^{17} cm^{-3} or more and 1×10^{21} cm^{-3} or less.

2. A 3-5 group compound semiconductor having a structure in which a second layer composed of a 3-5 group compound semiconductor represented by the general formula $In_uGa_vAl_wN$ ($u+v+w=1$, $0 < u \leqq 1$, $0 \leqq v < 1$, $0 \leqq w < 1$) is adjacent to a first layer composed of a 3-5 group compound semiconductor represented by the general formula $In_xGa_yAl_zN$ ($x+y+z=1$, $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$, $0 \leqq z \leqq 1$) in which the concentration of an n-type carrier is 1×10^{19} cm^{-3} or less, wherein the concentration of a p-type dopant is 1×10^{17} cm^{-3} or more and 1×10^{21} cm^{-3} or less, and the band gap is larger than that of said second layer.

3. A 3-5 group compound semiconductor having a structure in which a layer composed of a 3-5 group compound semiconductor represented by the general formula $In_xGa_yAl_zN$ ($x+y+z=1$, $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$, $0 \leqq z \leqq 1$) in which the concentration of an n-type carrier is 1×10^{19} cm^{-3} or less, wherein the concentration of a p-type dopant is 1×10^{17} cm^{-3} or more and 1×10^{21} cm^{-3} or less is adjacent to a layer composed of a p-type 3-5 group compound semiconductor represented by the general formula $In_aGa_bAl_cN$ ($a+b+c=1$, $0 \leqq a \leqq 1$, $0 \leqq b \leqq 1$, $0 \leqq c \leqq 1$).

4. A 3-5 group compound semiconductor having a structure comprising at least one layer composed of a 3-5 group compound semiconductor represented by the general formula $In_xGa_yAl_zN$ ($x+y+z=1$, $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$, $0 \leqq z \leqq 1$) in which the concentration of an n-type carrier is 1×10^{19} cm^{-3} or less, wherein the concentration of a p-type dopant is 1×10^{17} cm^{-3} or more and 1×10^{21} cm^{-3} or less, between a layer composed of a 3-5 group compound semiconductor represented by the general formula $In_uGa_vAl_wN$ ($u+v+w=1$, $0 < u \leqq 1$, $0 \leqq v < 1$, $0 \leqq w < 1$) and a layer composed of a p-type 3-5 group compound semiconductor represented by the general formula $In_aGa_bAl_cN$ ($a+b+c=1$, $0 \leqq a \leqq 1$, $0 \leqq b \leqq 1$, $0 \leqq c \leqq 1$).

5. A 3-5 group compound semiconductor having a structure comprising a second layer composed of a 3-5 group compound semiconductor represented by the general formula $In_uGa_vAl_wN$ ($u+v+w=1$, $0 < u \leqq 1$, $0 \leqq v < 1$, $0 \leqq w < 1$) carrying thereon a laminated layer composed of an n-type 3-5 group compound semiconductor represented by the general formula $In_pGa_qAl_rN$ ($p+q+r=1$, $0 \leqq p \leqq 1$, $0 \leqq q \leqq 1$, $0 \leqq r \leqq 1$) having larger band gap than that of said second layer, and at least one layer composed of a 3-5 group compound semiconductor represented by the general formula $In_xGa_yAl_zN$ ($x+y+z=1$, $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$, $0 \leqq z \leqq 1$) in which the concentration of an n-type carrier is 1×10^{19} cm^{-3} or less, wherein the concentration of a p-type dopant is 1×10^{17} cm^{-3} or more and 1×10^{21} cm^{-3} or less, between said layer composed of the n-type

3-5 group compound semiconductor and a third layer composed of a p-type 3-5 group compound semiconductor represented by the general formula $In_aGa_bAl_cN$ ($a+b+c=1$, $0 \leqq a \leqq 1$, $0 \leqq b \leqq 1$, $0 \leqq c \leqq 1$), on the opposite side to said second layer.

6. The 3-5 group compound semiconductor according to any of Claims 1 to 5 wherein the p-type dopant is Mg and/or Zn.

7. A method of producing a 3-5 group compound semiconductor according to any of Claims 1 to 6, comprising growing a 3-5 group compound semiconductor represented by the general formula $In_xGa_yAl_zN$ ($x+y+z=1$, $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$, $0 \leqq z \leqq 1$) in which the concentration of an n-type carrier is 1×10^{19} cm^{-3} or less, wherein the concentration of a p-type dopant is 1×10^{17} cm^{-3} or more and 1×10^{21} cm^{-3} or less, at temperatures of 600℃ or more and 950℃ or less according to a metal organic vapor phase growth method.

8. A light emitting device obtained by using a 3-5 group compound semiconductor according to any of Claims 1 to 6.